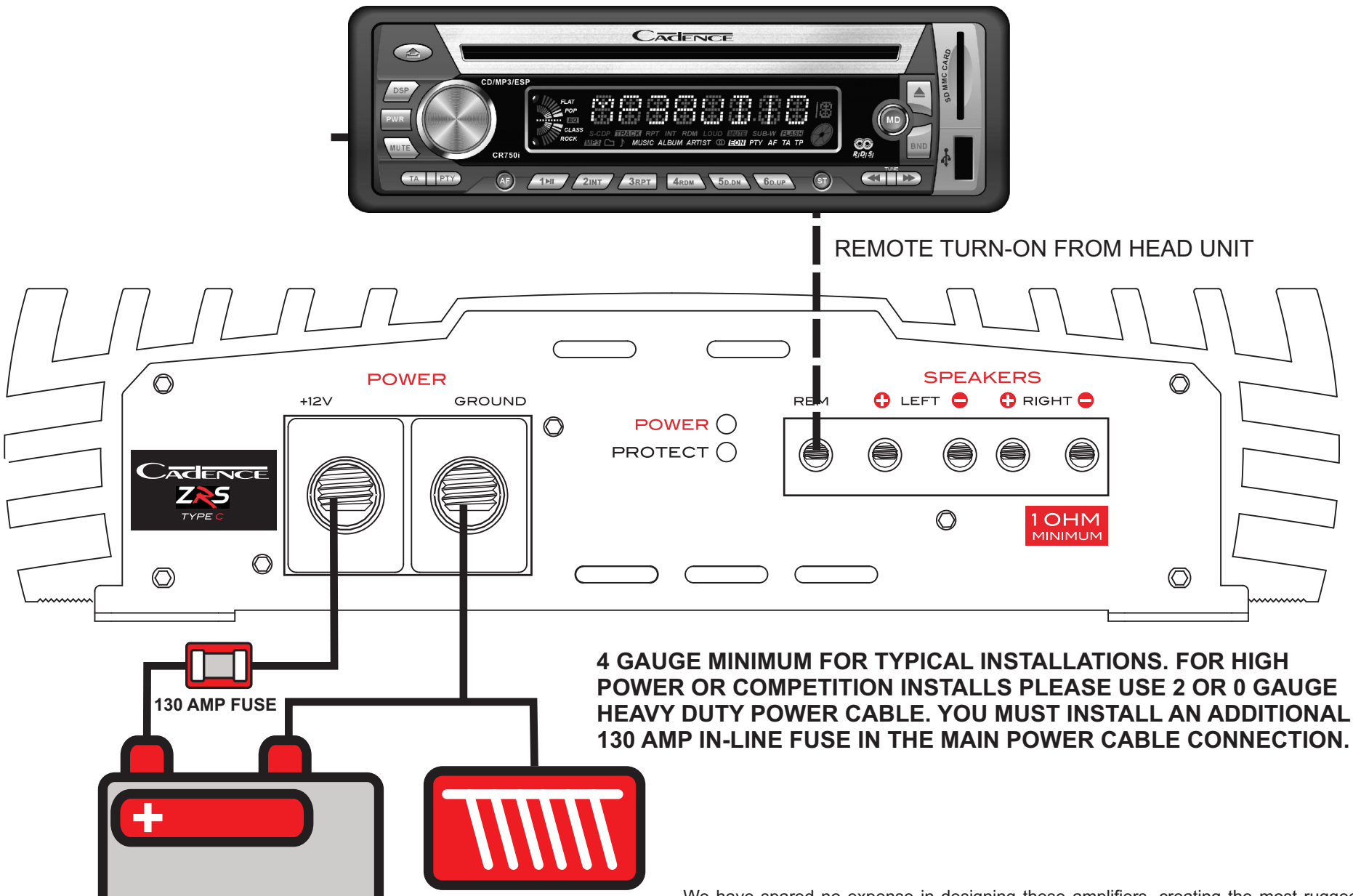
ZRS C1 QUICK INSTALLATION GUIDE



4 GAUGE MINIMUM FOR TYPICAL INSTALLATIONS. FOR HIGH POWER OR COMPETITION INSTALLS PLEASE USE 2 OR 0 GAUGE HEAVY DUTY POWER CABLE. YOU MUST INSTALL AN ADDITIONAL 130 AMP IN-LINE FUSE IN THE MAIN POWER CABLE CONNECTION.

We have spared no expense in designing these amplifiers, creating the most rugged, reliable, powerful and best performing amplifiers. In fact we are so sure of the quality we backup every ZRS Series amplifier with our exclusive two-year warranty which exemplifies our commitment to excellence in car audio musical reproduction. (See enclosed warranty card for details.)

Please read this installation guide carefully for proper use of your Cadence power amplifier. Should you need technical assistance during or after your installation please call our technical-line between 9:30 am and 5:00 PM EST at 732/370-5400. Read this entire guide fully before attempting your installation.

WARNING: BE AWARE! Use of this amplifier at extreme high volumes for extended periods of time may cause hearing loss and or hearing damage. During periods of prolonged high volume levels it is recommended that you use ear safety devices. Playing Cadence amplifiers at high volume levels while driving will impair your ability to hear necessary traffic sounds. While driving always keep your sound volume at reasonable levels. We at Cadence want you listening for many years to come.

When installing the amplifier, secure it tightly. An unmounted amplifier in your car can cause serious injury to passengers and damage to your vehicle if it is set in motion by an abrupt driving maneuver or short stop.

We suggest you construct a Red wiring harness with 2 additional fuse. One fuse should be located near the car battery. This fuse near the battery offers protection against damage from short circuits to the car chassis between the battery and the amplifier. A second fuse closer to the amplifier offers additional safety to the amplifier itself. This fused red power wire should be attached to the amplifier power terminal marked **12V+**.

The wire harness should be made of primary cable of at least **4** gauge. The harness should terminate in a large ring terminal for connection directly to the positive terminal of the car battery. Use a spade plug to attach the wire, which connects to the amplifier location marked **12V+**.

A second black color wire of equal gauge should be used as a ground connection to a welded chassis member. When connecting the ground wire make sure that there is no paint or other insulator blocking a good ground connection. When installing multiple amplifiers, mount them in close proximity so that they can all share the same ground point. Attach the black ground wire to the amplifier screw terminal marked **Ground**.

We recommend that you use the Cadence amplifier installation kits, which contain all the cabling and accessories necessary for a good, reliable installation.

Over the years we have received amplifiers back to our service department with melted power/ground terminals. The cause of this is a bad ground connection. When there is a lack of good ground, heat builds up at the weakest point which happens to be the contact screw of the amplifier terminal. Over time the heat generated will begin to melt the terminal. It is a good practice to feel the power and ground wires with your hands, near their amplifier connection after having played the amp for a while. If the wires feel hot to the touch you probably have a bad or loose connection. If you are sure of your connections and the wires still feel hot to the touch, you should upgrade the gauge of wire to next heaviest gauge.

The remote turn on connection is located on the barrier strip next to the power and ground connections. This connection is responsible for turning the amplifier on and off with the rest of the system. A smaller gauge wire can be used to make this connection to your radio's power antenna lead. Should your system not have any turn on leads, you can wire the remote terminal to an accessory lead, which turns on, with your cars ignition.

The ZRS Series amplifiers feature RCA preamp inputs. Run RCA cables from your sound source to the inputs of the amplifier. We suggest the use of high quality shielded RCA patch cords to help reduce and eliminate unwanted electrical noise to your system.

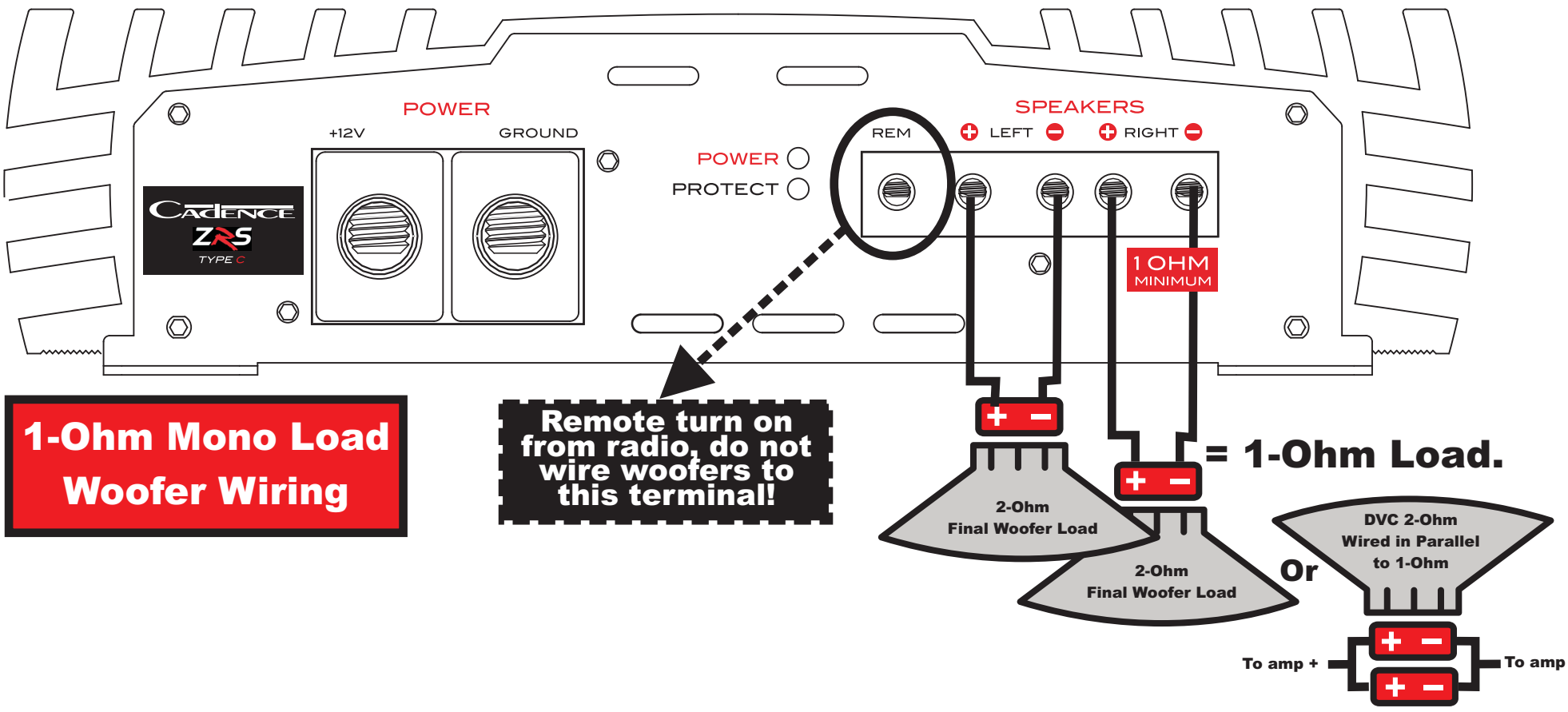
To avoid electrical noise from being injected in to your sound systems be sure to run the RCA cables on the opposite side of the vehicle that you used to carry the power and ground leads of the amplifier.

ZRS Type C1 - Mono Block Class D Power Amplifier

4-Ohm Power	:	1 x 800 Watts RMS
2-Ohm Power	:	1 x 1400 Watts RMS
1-Ohm Power	:	1 x 2250 Watts RMS
IHF 2002 Rated	:	1 x 45000 Watts Peak
Two Amps Bridged	:	1 x 4500 Watts RMS @ 2-Ohm
Damping Factor	:	>100 @ 100Hz
Preamp Voltage	:	200mV to 9Volt
Frequency Response	:	10Hz-500Hz
Signal to Noise Ratio	:	>88dB
Crossover Slope	:	24dB
Subsonic Filter	:	10Hz - 50Hz
Bass Focus	:	0 +7dB Adjustable
LP Crossover	:	50Hz-250Hz Adjustable
Bass Equalizer	:	0 - 12dB Adjustable
Phase Shift	:	0 - 180 Degrees Selectable
Dimensions	:	9.6” x 2.32” x 19” (243x59x484mm) Width x Height x Length

CADENCE

ZRS C1



BRIDGING AMPLIFIERS - HOW TO SET SWITCHES, INPUTS AND REMOTE CONTROL.

When bridging two amplifiers together all pre amp signals including crossover, phase control, bass equalizer, input gain, subsonic filter, bass focus are controlled by the Master amplifier. The entire pre amp section of the Slave amplifier is bypassed. This is done so all you have to do is to set the Master amplifier and the Slave amplifier will match the Master exactly. There is no need for any manual matching to occur. This ensures perfect alignment of your system. One Bass Control knob, plugged in to the Master amplifier will also control both amplifiers, thereby simplifying your installation as well.

You can use the RCA Pre amp Output of the Master Amplifier to feed secondary Full Range Multi-Channel amplifiers for a Mult-Amp system.

Bridging Two ZRS C1 Amplifiers

Set Master Amplifier to “MASTER”

Set Salve amplifier to “SLAVE 2”

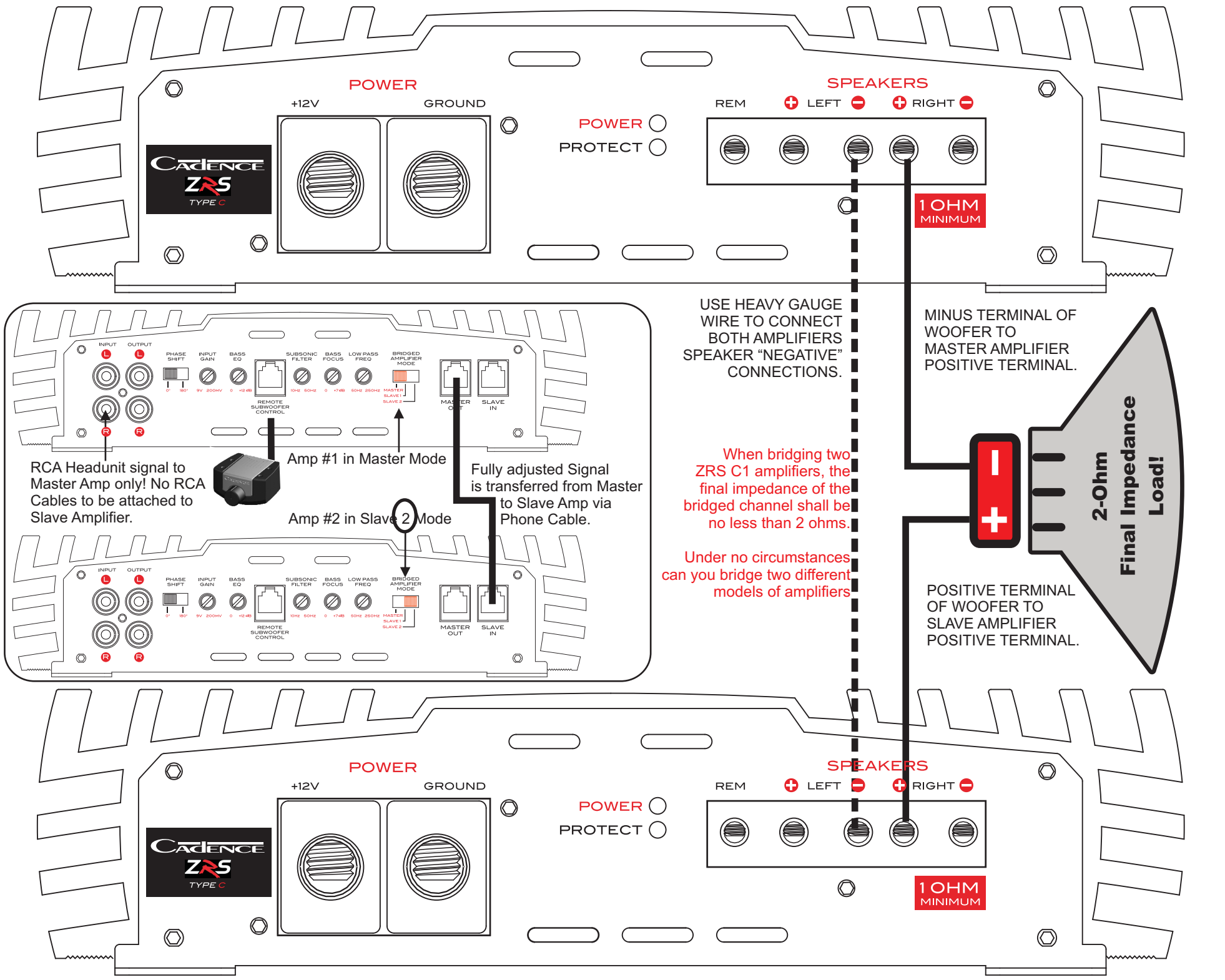
Set Phase Shift on both amps to same position.

Set all crossover setting, bass equalizer, subsonic filter, bass focus on MASTER amp to desired settings.

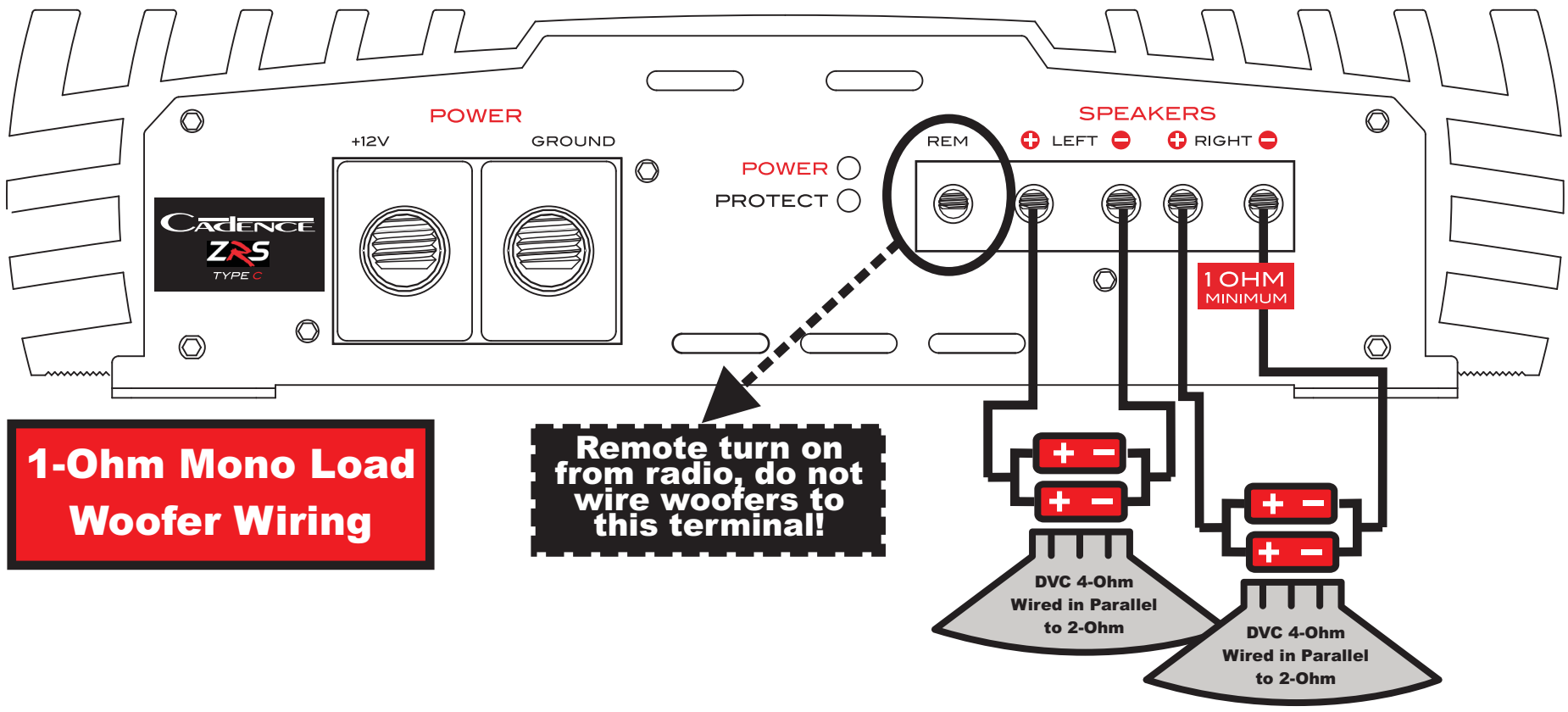
Use the “Bridging Cable” which was supplied with amplifier to connect MASTER OUT of amplifier #1 (Master) to SLAVE IN of amplifiers #2 (SLAVE). Do not substitute any other cable, if you need a longer cable or lost your cable, please contact Cadence.

Connect a heavy duty speaker wire between the NEGATIVE terminals of both amplifiers.

Connect your woofers **NEGATIVE TERMINAL** to MASTER amplifiers speaker **POSITIVE TERMINAL** and your woofers **POSITIVE TERMINAL** to SLAVE amplifier **POSITIVE TERMINAL.**



ZRS C1



DAISY CHAINING AMPLIFIERS - HOW TO SET SWITCHES, INPUTS AND REMOTE CONTROL.

When daisy chaining two amplifiers together all pre amp signals including crossover, phase control, bass equalizer, input gain, subsonic filter, bass focus are controlled by the Master amplifier. The entire pre amp section of the Slave amplifier is bypassed. This is done so all you have to do is to set the Master amplifier and the Slave amplifier will match the Master exactly. There is no need for any manual matching to occur. This ensures perfect alignment of your system. One Bass Control knob, plugged in to the Master amplifier will also control both amplifiers, thereby simplifying your installation as well.

Use the RCA Pre amp Output of the Master Amplifier to feed secondary Full Range Multi-Channel amplifiers for a Mult-Amp system.

Daisy Chaining ZRS C1 Amplifiers

Set Master Amplifier to "MASTER"

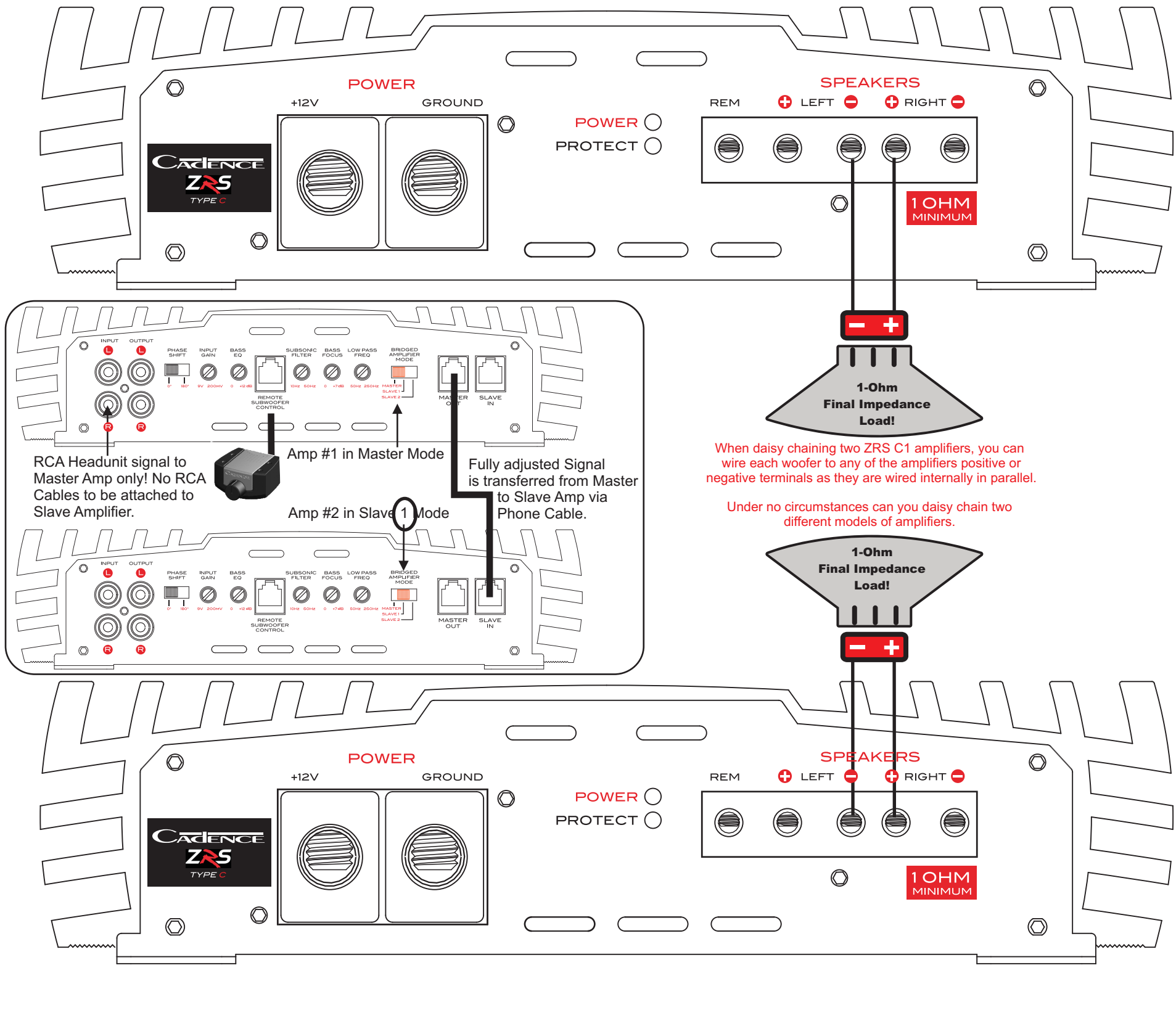
Set Salve amplifier to "SLAVE 1"

Set Phase Shift on both amps to same position.

Set all crossover setting, bass equalizer, subsonic filter, bass focus on MASTER amp to desired settings.

Use the "Bridging Cable" which was supplied with amplifier to connect MASTER OUT of amplifier #1 (Master) to SLAVE IN of amplifiers #2 (SLAVE). Do not substitute any other cable, if you need a longer cable or lost your cable, please contact Cadence.

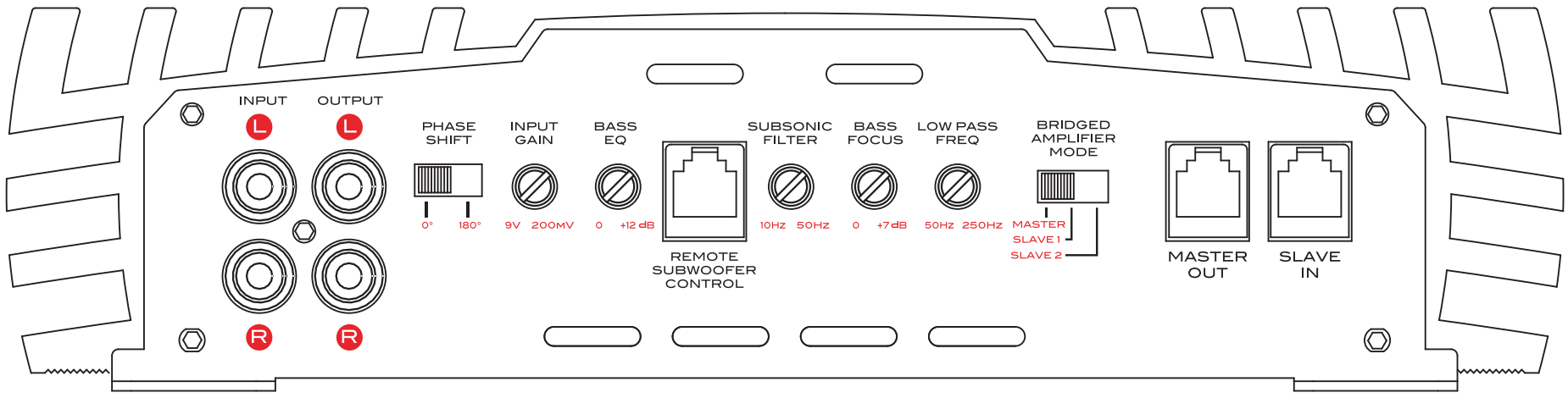
Connect woofers as you would typically connect them to each amplifier, not exceeding a 1 ohm load per amplifier. You can daisy chain as many ZRS C1 as you like while retaining control of your entire system from the Master amplifier.



When daisy chaining two ZRS C1 amplifiers, you can wire each woofer to any of the amplifiers positive or negative terminals as they are wired internally in parallel.

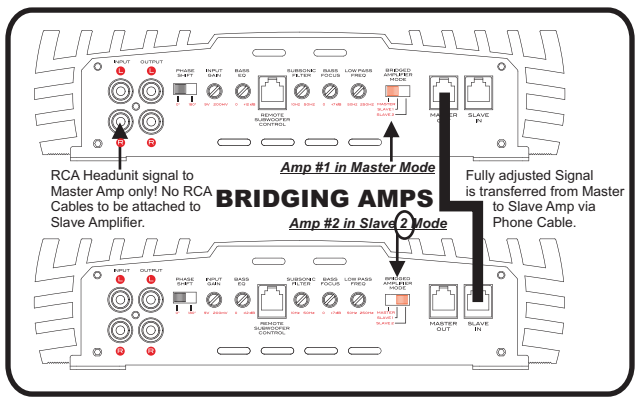
Under no circumstances can you daisy chain two different models of amplifiers.

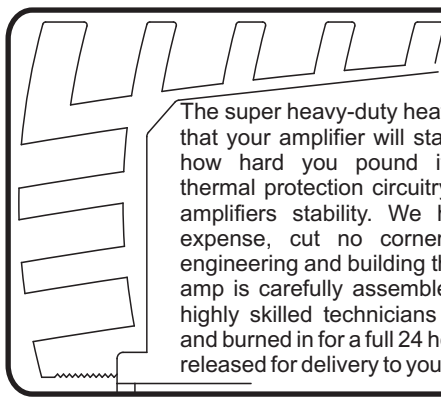
CADENCE ZRS C1 CONTROLS



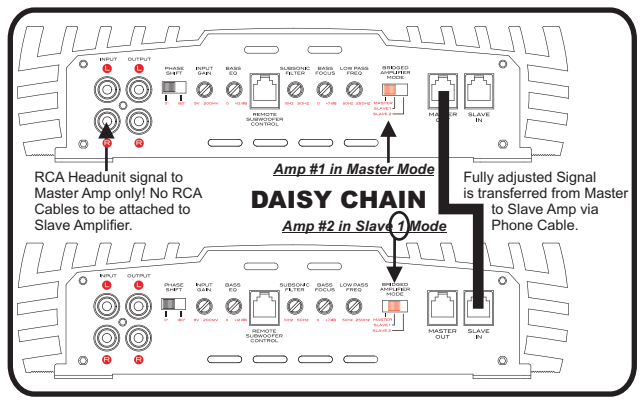
MASTER/SLAVE CONFIGURATION.

Whether you are daisy chaining or bridging two ZRS C1 amplifiers, our exclusive MASTER/SLAVE configuration insures the simplest installation possibilities. By following the guidelines set up. While other brands have you gain matching, crossover matching and phase matching their amps in multi-amp installations, the Cadence ZRS C1 system allows you to control ALL pre amp functions from the master amp including gains, crossovers and even the dashboard remote bass control. This system allows you to install any number of amps in a bridged mode to double power to 2 ohm or in daisy chain mode for multi-woofer systems.

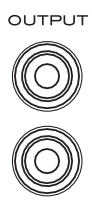




The super heavy-duty heat sink guarantees that your amplifier will stay cool no matter how hard you pound it. Computerized thermal protection circuitry guarantees the amplifiers stability. We have spared no expense, cut no corners in designing, engineering and building the ZRS C1. Each amp is carefully assembled by a group of highly skilled technicians and then tested and burned in for a full 24 hours before being released for delivery to you.



RCA PREAMP OUTPUT

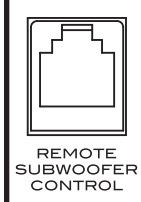


The preamp output is a full range signal mixed from both input channels. Use this signal to feed a secondary full range amplifier in your system.

INPUT GAIN CONTROL

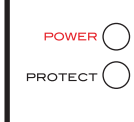
The ZRS C1 amplifier features advanced input gain control from 0.2 volts to 9 volts so that the amp can operate efficiently and at full power from any head unit pre amp signal.

DASH MOUNT BASS REMOTE



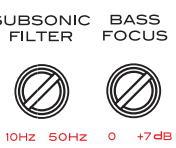
When using the Remote Subwoofer Control in a multi amp system the bass remote of the Master amp will control all amps in the system. Use only cable supplied with the remote for connection.

POWER & DIAGNOSTIC LED INDICATORS



ZRS amplifiers feature sophisticated IC controlled protection circuitry. If the amp goes in to a diagnostic condition from thermal over load or speaker short circuit the LED will light and amp will shut down.

ADJUSTABLE SUBSONIC WITH BASS FOCUS



The ZRS C1 features our exclusive BASS FOCUS circuitry which works as a variable Q control at the Subsonic Filter setting. By supplying up to 7dB of boost you can compensate for drivers in too small enclosures so a 10” woofer can sound like a 12” woofer and a 12” woofer can sound like a 15” woofer. In a vented enclosure set the Bass Focus to the port tuning frequency and you can add 7dB of increased bass rumble.

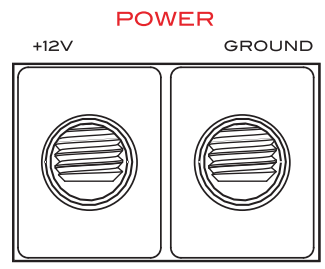
24dB CROSSOVER SLOPE BASS EQUALIZER

The crossover of the ZRS C1 features a steep 24dB per octave slope Butterworth low pass crossover ensuring that only the lowest frequencies are reproduced by the amplifier.

The amplifier also includes a Bass Equalizer with a center frequency of 45Hz which can be adjusted for up to 12dB of additional gain at that frequency.

CONNECTION TERMINALS

The ZRS C1 features heavy duty bolt down terminals, the power and ground terminals accept 0 - 2 gauge wire while the speaker terminals can accept 8 gauge wire.



Before you begin with your installation, disconnect the NEGATIVE (-) terminal from your car's battery. This safety precaution will avoid possible short circuits while wiring your amplifier. Cadence amplifiers operate on 12-volt negative ground systems only.

It is recommend that you layout your sound system design on paper first. This will help you during the installation so that you will have a wiring flow chart and not miss-wire any of your components.

Mount the amplifier in the trunk or hatch area of your vehicle. Never install an amplifier in the engine compartment or on the firewall. Please be sure to leave breathing room around the amplifier heat sink so that it can dissipate the heat it produces efficiently. The amplifier can be installed either horizontally or vertically.

When mounting the amplifier on the trunk floor, be sure to watch for your gas tank, gas lines and electrical lines. Do not drill or mount any screws where they might penetrate the gas tank of your car.

Once the system is operational, the first thing to do, is set all crossover points to approximate settings. In the case of the basic sub woofer system Low Pass filter crossover at 100 Hz or so. Set the Bass Boost equalizer controls to 0 dB (Flat Switch Position.)

Now you should set the amplifiers Input Sensitivity adjustment. The knob accessible on the side of the amplifier marked INPUT GAIN adjusts the input sensitivity from 300mV to 7Volts.

To adjust the input sensitivity, turn the control using a small flat head screwdriver fully counter clock wise to the minimum position. Do not apply any pressure while turning as this might break the control unit. Adjust your radio volume level to maximum volume. Now turn the level control on the amplifier clockwise towards the Maximum marking until audible distortion occurs. When you begin to hear any distortion in the sound, back down one notch and your amp is set. It is helpful to have a second person to help you set the gain.

When setting up a multi-amp system, set each amplifier’s gain separately. Start off with the bass amplifier, then adjust the highs amplifier’s level control to match.

Once you are satisfied with the level control settings, use any equalizer controls to adjust the system tonal level for personal preference. Keep in mind that after equalizing, you may have to go back and reset the amplifiers level controls.

The level control of any car amplifier should not be mistaken for a volume control. It is a sophisticated device designed to match the output level of your source unit to the input level of the amplifier. Do not adjust the amplifier gain to maximum unless your input level requires it.

If your unit has been professionally installed please do not change the gain settings set by the installer, he is the professional!

Your system can also be extremely sensitive to noise when the LEVEL is set to maximum and does not match your input signal. The gain adjustments need to be made only once when first setting up the system.